

REMARKS

Overview

These remarks are set forth in response to the Non-Final Office Action. Presently, 1-2, 4-5, 7, 10-12, 14-15 and 17 are pending in the Patent Application. Claims 1, 7, 11 and 15 are independent in nature. Claims 3, 6, 8, 9, 13, 16 and 18 have been canceled without prejudice. Favorable reconsideration and allowance of the pending claims are respectfully requested.

Although Applicant disagrees with the broad grounds of rejection set forth in the Office Action, Applicant has amended claims 1, 7, 11, 14 and 15 in order to facilitate prosecution on the merits.

Claim Rejections – 35 U.S.C. § 112

Claims 1-5, 7 and 9-17 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicant respectfully traverses these rejections.

Applicant submits that claim 1 has been amended to recite, in relevant part, that “said filtered data streams having substantially similar impulse responses; and equalizing said filtered data streams using a plurality of equalizers each having substantially similar equalization parameters.” Applicant respectfully requests withdrawal of the § 112 rejections in view of the above claim amendments.

Claim Rejections - 35 U.S.C. § 103

Claims 1-5, 7 and 9-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Publication No. 2003/0185310 to Ketchum et al. (hereinafter “Ketchum”) in view of United States Publication No. 2006/0159160 to Kim et al. (hereinafter “Kim”). Applicants respectfully traverse the rejection, and requests reconsideration and withdrawal of the rejection.

Applicant submits that the cited references, taken alone or in combination, fail to teach each and every element recited in claims 1-2, 4-5, 7, 10-12, 14-15 and 17 and thus they define over the cited references. For example, with respect to claim 1, the cited references fail to teach at least the following language:

estimating a channel impulse response matrix, wherein said estimating comprises estimating at least one channel characteristic for said channel, approximating a plurality of channel impulse response values based on said channel characteristic, and creating said channel impulse response matrix using said channel impulse response values....

According to the Office Action, the above-recited language is disclosed by the Ketchum at paragraphs [0018]-[0022]. This assertion is respectfully traversed.

Applicant respectfully submits that claim 1 defines over Ketchum. Ketchum, arguably, teaches precoding for a multipath channel in a MIMO system. More particularly, the cited portions of Ketchum, teach “channel eigenmode decomposition is one technique for facilitating the transmission of multiple symbol streams over the MIMO channel. This technique initially decomposes the channel response matrix, H , using singular value decomposition (SVD).” Applicant submits that this is different than the above recited language of claim 1.

Applicant submits that decomposing a channel matrix using SVD, as arguably taught by Ketchum, is different than “estimating a channel impulse response matrix, wherein said estimating comprises estimating at least one channel characteristic for said channel, approximating a plurality of channel impulse response values based on said channel characteristic, and creating said channel impulse response matrix using said channel impulse response values...” as recited in amended independent claim 1. Furthermore, Applicant submits that they have been unable to locate at least the above recited language of claim 1 in the teaching of Ketchum. Moreover, Applicant submits that Kim also fails to teach the above recited language. Consequently, the cited references, whether taken alone or in combination, fail to disclose, teach or suggest every element recited in claim 1.

Absence from the cited references of the above-mentioned claim elements negates obviousness. Accordingly, Applicant respectfully requests removal of the obviousness rejection with respect to claim 1. Furthermore, Applicant respectfully requests withdrawal of the obviousness rejection with respect to claims 2 and 4-5, which depend from claim 1, and therefore contain additional features that further distinguish these claims from the cited references.

Independent claims 7, 11 and 15 have been amended to recite elements similar to those recited in claim 1. Therefore, Applicant respectfully submits that claims 7, 11 and 15 are not obvious and are patentable over the cited references for reasons analogous to those presented with respect to claim 1. Accordingly, Applicant respectfully requests removal of the obviousness rejection with respect to claims 7, 11 and 15. Furthermore, Applicant respectfully requests withdrawal of the obviousness rejection with respect to claims 10, 12, 14 and 17 that depend from claims 7, 11 and 15 respectively, and therefore contain additional features that further distinguish these claims from the cited references.

Conclusion

It is believed that claims 1-2, 4-5, 7, 10-12, 14-15 and 17 are in condition for allowance. Accordingly, a timely Notice of Allowance to this effect is earnestly solicited.

Applicants do not otherwise concede, however, the correctness of the Office Action's rejection with respect to any of the limitations of the independent claims and dependent claims discussed above. Accordingly, Applicants hereby reserve the right to make additional arguments as may be necessary to further distinguish the claims from the cited references, taken alone or in combination, based on additional features contained in the independent or dependent claims that were not discussed above. A detailed discussion of these differences is believed to be unnecessary at this time in view of the basic differences in the independent claims pointed out above.

The Examiner is invited to contact the undersigned to discuss any matter concerning this application.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to the Deposit Account No. 50-4238.

Respectfully submitted,
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/Andrew H. Aurand/

Andrew H. Aurand, Reg. No. 61,875
Under 37 CFR 1.34(a)

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